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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,212	06/15/2001	Holger Birk	016790-0425	5119

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EXAMINER

NEGRON, ISMAEL

ART UNIT PAPER NUMBER

2875

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,212

Applicant(s)

BIRK ET AL.

Examiner

Ismael Negron

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on September 25, 2002 has been entered. Claims 11, 16 and 23 have been amended. No claims have been cancelled. Claim 24 has been added. Claims 1-24 are still pending in this application, with claims 1, 9, 20 and 24 being independent.
2. The corrected or substitute drawings were received on September 25, 2002. These drawings are acceptable.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-
(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. Claims 1-4, 6-18, 20, 21 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Ranka et al. (U.S. Pat. 6,097,870).

Ranka et al. discloses an illumination device having:

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- **a laser for generating a light beam, Figure 9, reference number 92;**
- **a microstructured optical element for receiving the light beam**
a laser for generating a light beam, Figure 9, reference number 96;
- **the microstructured element spectrally broadening the light beam, column 7, lines 11-38;**
- **optical means for shaping the spectrally broadened light beam, Figure 9, reference number 96.2;**
- **the light beam being directed to illuminate an object, inherent;**
- **means for selecting at least one wavelength from the broadened beam and directing it to the object, column 7, lines 39-51;**
- **means for adjusting the power of the broadened beam, column 7, lines 7-10;**
- **means for adjusting the spectral composition of the beam, column 7, lines 18-38;**
- **the beam being composed of a plurality of pulses, column 6, lines 14-17;**
- **means for adjusting the width of the pulses, column 9, lines 52-58;**

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- **means for adjusting the chirp of the pulses**, column 10, lines 17-20;
- **the microstructure element having a plurality of micro-optical structure elements**, Figure 1, reference number 14;
- **the micro-optical structure elements having at least two different optical densities**, column 4, lines 1-5;
- **the microstructure optical element having a first region with a homogenous structure and a second region formed by the micro-optical structure elements**, Figure 1;
- **the first region enclosing the second region**, Figure 1, reference number 16;
- **the microstructure optical elements being formed by at least one selected from the group consisting of adjacent glass, plastic material, cavities, cannulas, webs, honeycombs or tubes**, column 4, lines 10-13;
- **the microstructured element consisting of a photonic band gap material**; and
- **the microstructured element being configured as an optical fiber**, column 2, lines 14-24.

In addition, the Examiner take Official Notice of Applicant's statement conceding that Ranka et al. teaches an illumination device having a laser, a microstructured fiber, the laser light being broadened in the fiber by non-linear effects, and the use of photonic

band gap materials as microstructured fibers. See page 1, lines 14-20 of the specification as filed.

Allowable Subject Matter

4. Claims 5, 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office Action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

6. The following is a statement of reasons for the indication of allowable subject matter:

Applicant teaches an illumination apparatus having a laser, a microstructured optical device, means for spectrally broadening and shaping the laser beam to direct illumination onto a object, such apparatus also including means to adjust the polarization of the spectrally broadened laser beam, or the microstructured optical device being a tapered fiber.

Response to Arguments

Applicant's arguments filed September 25, 2002 have been fully considered but they are not persuasive.

7. Regarding the Examiner's rejection of claims 1, 9 and 20 under 35 U.S.C. 102(e) as anticipated by Ranka et al., the applicant argues that the cited reference fails to disclose all the features of the claimed invention, specifically means for shaping the spectrally broadened light, means for varying the power of the broadened light, or the spectral composition of the broadened light being adjusted.

In response to applicant's arguments that Ranka et al. fails to disclose specifically means for shaping the spectrally broadened light, while it might be true that the function and purpose of the grating 96.2 is not to shape the light from the microstructured fiber, it is also true that such grating do shape the illumination beam outputted by the structure of Ranka et al., whether such shaping was intended, or even, required is beyond the point.

Regarding Ranka et al. not disclosing varying the power of spectral composition, the applicant is directed to column 7, lines 6-10 of Ranka et al., where, as admitted by the applicant, varying the power and/or wavelength of the input beam is specifically disclosed. As the applicant will no doubt agree, varying such parameter of the input beam would effectively change the power and spectral composition of the output beam, as claimed by the instant application.

8. With respect to claims 2-8, 10-19 and 21-23, the applicant presents no arguments, except stating that such claims are dependent upon claims 1, 9 and 20 and would be allowable if the independent claims are allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negron whose telephone number is (703) 308-6086. The examiner can normally be reached on Monday-Friday from 9:00 A.M. to 6:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea, can be reached on (703) 305-4939. The facsimile machine number for the Art Group is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800

Inr

November 27, 2002